NOTES.

We regret to have to record the death of the well-known traveller, Mr. William Gifford Palgrave. He died in his sixty-third year at Montevideo, where he was British Minister. Mr. Palgrave will be remembered chiefly as the author of the famous "Narrative of a Year's Journey through Central and Eastern Arabia, 1862-63," one of the most brilliant and fascinating books of travel of modern times.

Dr. Carnelly, of University College, Dundee, has been appointed Professor of Chemistry at the University of Aberdeen, in the room of Dr. Brazier, who has resigned.

The Emperor of Japan has conferred the Order of the Rising Sun, of the Fourth Class, on Mr. Thomas Alexander, Professor of Engineering, Trinity College, Dublin, for services in the Imperial University of Japan.

Mr. Edgar Thurston, Superintendent of the Government Museum, Madras, expects to arrive in England early in October. We understand that Mr. Thurston has made some valuable collections of corals and other marine animals.

Dr. Latham will deliver the Harveian oration at the Royal College of Physicians on Thursday, October 18, at 4 o'clock.

The Exhibition held by the Photographic Society of Great Britain was opened on Monday at 5A Pall Mall East. It will remain open daily, and on Monday, Wednesday, and Saturday evenings, until November 14. Every Monday evening transparencies will be shown with the Society's optical lantern.

The French Government has reorganized its system of war aërostation. Henceforward the activity of the director of this department will be chiefly concentrated on the manufacture of captive balloons for the several *corps d'armée* and fortifications.

Within a month a new central station for the electric light will be opened at the Palais Royal, Paris, for the shops, the galleries, the Conseil d'État, the Cour des Comptes, the Théâtre Français, and the Palais Royal. The building of the cave in which the engines are to be placed in the courtyard is almost finished.

On Tuesday the seventh International Congress of Americanists was opened at Berlin, in the large hall of the Rathhaus, before a brilliant gathering of archæologists. The opening address was delivered by Herr von Gossler, Minister of Public Worship, who warmly welcomed his hearers in the name of the German Emperor and the Prussian Government, and referred to the distinguished services rendered by the brothers Humboldt in unfolding the secrets of the New World. The Congress will sit till Saturday.

At the recent meeting of the American Association for the Advancement of Science, Dr. Daniel G. Brinton read an interesting and suggestive paper on the alleged Mongoloid affinities of the American race. He held that the asserted Mongolian or Mongoloid connection of the American race cannot be proved either by linguistics or by physical resemblances. Speaking of the typical, racial American culture, he maintained that it is as far as possible, in spirit and form, from the Mongolian. "Compare," said Dr. Brinton, "the rich theology of Mexico or Peru with the barren myths of China. The theory of government, the method of house-construction, the position of woman, the art of war, are all equally diverse, equally un-Mongolian. It is useless to bring up single art-products or devices, such as the calendar, and lay stress on certain similarities. The doctrine of the parallelism of human development explains far more satisfactorily all these coincidences. The sooner that Americanists generally, and especially those in Europe, recognize the absolute autochthony of native American culture, the more valuable will their studies become."

The following changes have recently taken place in the editing of German botanical journals. The place of Prof. de Bary, as editor of the *Botanische Zeitung*, has been supplied by Prof. Graf zu Solms-Laubach, of Tübingen, who has recently succeeded the late Dr. Eichler in the Botanical Chair at Berlin; he will act in conjunction with the late Prof. de Bary's coadjutor, Dr. Wortmann. Dr. Kohl, of Marburg, has associated himself with Dr. Uhlworm in the editorship of the *Botanisches Centralblatt*, in the place of Dr. W. J. Behrens, who has been compelled to relinquish the editorship from the pressure of other engagements.

The interesting and valuable reports on colonial fruit, which have been appearing in the *Kew Bulletin*, are continued in the October number. Much information is given as to fruit in Sierra Leone, the Gold Coast, Lagos, Natal, Malta, Cyprus, Ceylon, the Straits Settlements, and St. Helena.

The late Mr. Samuel Miller, of Lynchburg, bequeathed to the University of Virginia 100,000 dollars, the income from which was to be expended for "the advancement of agriculture as a science and as a practical art by the instruction therein, and in the sciences connected therewith, of the youth of the country." A part of the income is to be used to maintain the work in agricultural chemistry already carried on at the University; but, according to *Science*, the larger portion of the income will be spent in promoting instruction and research in biology. A biological laboratory is being fitted up, and the equipment has been ordered. The instruction will be by lectures, with associated laboratory work, and will cover general biology, zoology, comparative anatomy, and biology applied to agriculture. The Professor-elect is Mr. Albert H. Tuttle, recently Professor of Biology in the Ohio State University at Columbus.

An interesting gas, allene, the isomer of allylene, the second member of the acetylene series of hydrocarbons, has been obtained in the pure state, and its constitution thoroughly investigated, by Messrs. Gustavson and Demjanoff, of Moscow. Very little, and that contradictory, has hitherto been published concerning this gaseous hydrocarbon, which differs so remarkably from ordinary allylene, and yet is represented by the same empirical formula, C_3H_4. The new method of obtaining it i very simple, consisting in the action of zinc dust upon an alcoholic solution of dibrom-propylene. Practically one starts with glyceryl tribromide, $C_3H_5Br_3$, allowing it to gradually drop from a stoppered funnel into a flask containing pieces of caustic potash, and connected with a condenser. The flask is heated in a paraffin bath to about 150° C., when the propylene dibromide distils over as an oil of acroleïn-like odour. When the requisite quantity of the glyceryl tribromide has been added, the temperature is allowed to sink to 130°, and water run into the flask. On continuing the distillation the rest of the oil passes over in the steam. The dried and re-distilled oil is then used for the preparation of allene. It is allowed to slowly pass in drops into a second flask furnished with an upright condenser, and containing zinc dust and 80 per cent. alcohol. The flask is heated in a water-bath, and after about twenty drops of the dibromide have entered, the evolution of gas begins, and may be nicely regulated by the speed of dropping. The gas passes by a leading tube from the condenser, and may be stored over water in a gas-holder, being far less soluble than allylene. The gaseous allene thus obtained is colourless, has a peculiar smell, reminding one of its isomer, and burns with a smoky flame. Unlike allylene, however, it yields no precipitate with ammoniacal copper or silver solutions, but gives white precipitates with aqueous solutions of mercury salts. It combines rapidly, under considerable rise of temperature, with bromine, forming a colourless tetrabromide, $C_3H_4Br_4$, liquid at ordinary temperatures, with a camphor-like odour, but condensing to a crystalline mass

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at – 18°. In this respect, again, it differs from the tetrabromide of allylene, which remains liquid when surrounded by a freezing mixture. The constitution was finally proved to be $CH_2{=}C{=}CH_2$, as expected, the tetrabromide being, consequently, $CH_2Br{-}CBr_2{-}CH_2Br$; while allylene possesses the constitution $CH_3{-}C{\equiv}CH$, being, in fact, methyl acetylene, its tetrabromide being, therefore, $CH_3{-}CBr_2{-}CHBr_2$, a substance very different from the tetrabromide of allene.

INVITATIONS have been issued to each maritime nation to send one or more delegates to attend an International Maritime Conference to meet in Washington on April 17, 1889. The objects of the Conference will be to revise the regulations concerning vessels at sea, to adopt a uniform system of signals to indicate the direction in which vessels are moving in fog, snow, or thick weather, and at night, to convey warnings of approaching storms and other important information, and to formulate regulations for the prevention of collisions. The importance of the subject is so great that a full attendance of delegates is expected.

IN the *Archiv der naturwissenschaftl. Landesdurchforschung von Böhmen*, Band vi. No. 5, 1888, is a valuable memoir by Prof. Franz Klapalek under the title "Untersuchungen über die Fauna der Gewasser Böhmens, Part 1, Metamorphose der Trichopteren," in which the transformations of nearly twenty species of Bohemian caddis-flies are detailed, with illustrative figures and copious introductory general remarks on the internal and external anatomy of the larvæ and pupæ. The author states that the larvæ may be divided into two sections, which he terms "*raupenförmige*" and "campodeoid" respectively, and which correspond pretty nearly with the divisions "inæquipalpia" and "æquipalpia" employed by systematists for the perfect insects. Prof. Klapálek has been very successful in breeding these insects, a matter always attended with difficulty, more especially with those forms that inhabit rapid streams and torrents. A further series of observations will appear next year.

SOME interesting prehistoric remains have been discovered near Basingstoke. Six urns have been disinterred, and stone implements of very rude form have been found in the field in immediate relation with the vessels, although none have actually been discovered buried with the pottery. The site of the interments is a field adjoining Dummer Clump, a conspicuous landmark in the parish of Dummer, and near Kempshott Park, the seat of Sir Nelson Rycroft, who is the owner of the estate. A shepherd was pitching hurdles, when the bar came in contact with a large stone, which, on being removed, was found to have covered two very rudely-formed vessels, of which the under one was pronounced by Dr. S. Andrews, of Basingstoke, to contain human bones which had undergone incineration. Subsequently, another urn was removed, of a much coarser character, bearing a band round the base of the rim ornamented with sunken dots. All the vessels are hand-made and apparently fire-baked, and the larger ones have suffered some damage from the plough, which must have repeatedly passed over them.

THE new number of the *Internationales Archiv für Ethnographie* (Band i. Heft 5) will fully maintain the reputation of this excellent periodical. Among the contents are an article on arrows from Torres Straits, by Dr. M. Uhle; a note on a singular mask from Boissy Island, North-East New Guinea, and queries on the lizard in the folk-lore of Australasia, by Prof. H. H. Giglioli; and a paper on the chewing of the betel-nut, by F. Grabowsky. The coloured illustrations, as usual, are admirable.

FISHING is to be resumed this season at the Sild oyster-banks, on the coast of Jutland, which have been preserved for six years. The oysters are reported to be plentiful and in splendid condition.

THE additions to the Zoological Society's Gardens during the past week include a Grivet Monkey (*Cercopithecus griseoviridis* ♂) from North-East Africa, presented by Lord Archibald Campbell; a Rhesus Monkey (*Macacus rhesus* ♀) from India, presented by Major Dudley Buckle, R.A.; a Bonnet Monkey (*Macacus sinicus* ♂) from India, presented by Mr. G. C. Gosling; two Sooty Mangabey Monkeys (*Cercocebus fuliginosus* ♀ ♀) from West Africa, presented by Mr. Edward Felton, R.E.; an Ocelot (*Felis pardalis* ♂) from Pernambuco, presented by Mr. E. Percy Bates; a Weka Rail (*Ocydromus australis*) from New Zealand, presented by Mr. H. Lindsay; a Rose-crested Cockatoo (*Cacatua moluccensis*) from Moluccas, presented by Miss Eve; a Puffin (*Fratercula arctica*) from Cornwall, presented by Mr. J. Muir Drew; a Common Snake (*Tropidonotus natrix*), a Common Slowworm (*Anguis fragilis*), British, presented by Mr. P. S. Hutchinson; a Common Viper (*Vipera berus*), British, presented by Mr. A. H. N. Smith; four European Tree Frogs (*Hyla arborea*), European, presented by Mr. Lionel A. Williams; two Grivet Monkeys (*Cercopithecus griseo viridis* ♂) from North-East Africa, deposited; a White-backed Trumpeter (*Psophia leucoptera*) from the Upper Amazons, received in exchange; two Collared Fruit Bats (*Cynonycteris collaris*), an Axis Deer (*Cervus axis* ♂), a Canadian Beaver (*Castor canadensis*), four Chilian Pintails (*Dafila spinicauda*), bred in the Gardens.

OUR ASTRONOMICAL COLUMN.

THE SATELLITES OF MARS.—These faint objects have been successfully observed, during the late opposition, with the great telescope of the Lick Observatory. The building operations prevented the observations being carried on systematically, but measures of distance and position of one or both satellites were obtained on nine evenings between April 9 and April 28, and Phobos was seen as late as July 18, when the theoretical brightness of Mars was but one-tenth of what it was at the opposition of 1877, or one-fifth of what it will be at the coming opposition of 1890. A preliminary reduction of the observations gives the following corrections to the times of elongations as given by Mr. Marth in the *Monthly Notices* of the Royal Astronomical Society, and by the *American Nautical Almanac* respectively:—

	Marth. h.		American *N.A.* h.
Phobos ...	+ 0·427	...	– 0·33
Deimos ...	+ 0·020	...	+ 0·35

Mr. Keeler, who made the observations, remarks (*Astr. Journ.*, No. 178) that, so far as his estimates of the brightness of the satellites go, they support Prof. Pickering's conclusion that Deimos is one half-magnitude brighter when on the eastern side of the planet than when on the western.

TOTAL LUNAR ECLIPSE OF JANUARY 28.—No. 4 of vol. xviii. of the Annals of the Harvard College Observatory contains an account of the observations made there of the eclipse of the moon of January 28. The observations were of three classes—first, of the occultations of Dr. Döllen's list of stars; secondly, of the variation in the actinic brightness of the moon; and thirdly, the search, by means of photography, for a possible lunar satellite. In this second inquiry Mr. W. H. Pickering found that the photographic brightness of the full earth was 23·6 times as great as that of the full moon, equivalent to an albedo of 1·7 times that of the moon. The diminution in brightness ascribed to the moon during eclipse is most remarkable, Mr. Pickering giving the uneclipsed full moon as 1,400,000 times as bright as during the central phase, or about *twice* the ratio existing between the sun and full moon. In the search for the satellite a succession of photographs were taken, the telescope being made to follow the moon's motion as closely as possible, so that the stars were represented by short trails. A satellite would have left a trail inclined to the star trails and of a different length. The result of the search was negative, and as a satellite of the tenth magnitude, would have been registered on the plates, it appears probable that the moon has no satellite more than 200 metres in diameter, unless it was involved in the shadow of the earth during the eclipse, or

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